Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Review of the Emergency Alert System	)	EB Docket No. 04-296
	)	

To: The Commission

REPLY COMMENTS OF RURAL CELLULAR ASSOCIATION

Rural Cellular Association ("RCA")[1], by its attorneys, respectfully submits its reply to comments filed in response to the Commission's Further Notice of Proposed Rulemaking in the above-captioned proceeding seeking comment on the actions the Commission should take to help expedite the development of the Emergency Alert System ("EAS") as a fully integrated, digitally-based public alert and warning system for the American public. *See Review of the Emergency Alert System*, 37 Communications Reg. (P&F) 47, 51-52 (2005) ("*FNPRM*").

I. JURISDICTION AND PREEMPTION

In its comments, RCA suggested that the Commission may be without ancillary jurisdiction to direct Commercial Mobile Radio Service ("CMRS") providers to transmit EAS messages over their networks.[2] RCA also suggested that the Commission would stay safely within the limits of its jurisdiction if it required that handsets be programmed to monitor and receive EAS messages broadcast over a government radio network. *See id.* at 5. Only two other

[1] RCA is an association representing the interests of approximately 100 small and rural wireless licensees providing commercial services to subscribers throughout the nation. Its member companies provide service in more than 135 rural and small metropolitan markets where approximately 14.6 million people reside. RCA was formed in 1993 to address the distinctive issues facing wireless service providers.

[2] *See* FNPRM Comments of RCA, at 2-5. Comments responsive to the *FNPRM* will be cited as "FNPRM Comments." Comments in response to the Commission's initial notice of proposed rulemaking, *see Review of the Emergency Alert System*, 19 FCC Rcd 15775 (2004), will be cited as "NPRM Comments."

commenters touched on the issue of the Commission's jurisdiction.

USA Mobility, Inc. ("Mobility") asserts that the Commission has "ample authority to regulate emergency alerts and warnings."[3] That may be true generally.[4] But the Commission's authority to regulate EAS cannot exceed the limits of its jurisdiction to regulate specific communications technologies. The Commission would exceed those limits if it regulates CMRS providers specifically as Mobility recommends — by making it mandatory that they participate in the "transmission of emergency messages."[5]

If the Commission's jurisdiction over wireless EAS is ancillary to its regulation of CMRS providers, wireless EAS regulation "cannot be antithetical to a basic regulatory parameter established" for CMRS. *American Library Ass'n v. FCC*, 406 F.3d 689, 702 (D.C. Cir. 2005) (quoting *Digital Broadcast Content Protection*, 18 FCC Rcd 23550, 23563 n.70 (2003)). Forcing CMRS providers to transmit over their networks the public alerts and warnings of non-network users for free would be antithetical to the basic regulatory parameters imposed by 47 U.S.C. §§ 153(44) and 332(d)(1).[6]

Fearing the imposition of "balkanized" state mandates on CMRS providers, Sprint Nextel Corporation ("Sprint Nextel") calls for "federal preemption of any state laws mandating wireless alerts."[7] RCA shares Sprint Nextel's concern that wireless carriers be spared the burdens of complying with varying state laws mandating wireless alerts. However, preemption must come

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[3] Mobility FNPRM Comments, at 9 (citing *FNPRM*, 37 Communications Reg. (P&F) at 49).

[4] *See* 47 U.S.C. § 151 (the Commission is to promote "safety of life and property through the use of wire or radio communications").

[5] *See* Mobility FNPRM Comments, at 10.

[6] *See* RCA FNPRM Comments, at 3-4, 10-11.

[7] Sprint Nextel FNPRM Comments, at 6.

from Congress. The Commission currently lacks the authority to preempt state emergency alert laws.

The Commission can preempt state laws and regulations under certain circumstances. *See, e.g., Lousiana PSC v. FCC*, 476 U.S. 355, 368-69 (1986). However, none of those circumstances are present as the Commission considers the role CMRS providers should play in the next-generation EAS.[8] Congress has never enacted legislation that expresses its clear intention to preempt state laws mandating public alerts and warnings. To date, the Commission's EAS authority comes primarily from presidential directives, not congressional legislation. *See FNPRM*, 37 Communications Reg. (P&F) at 48-49. Moreover, the Commission does not purport to exercise exclusive jurisdiction over the EAS. It administers the system jointly with other federal agencies, including the National Weather Service ("NWS") of the National Oceanic and Atmospheric Administration ("NOAA"). *See id.* at 48. And state and local agencies have developed EAS plans that seemingly do not conflict with federal regulations. *See id.* at 49. Indeed, emergency messages address matters of immediate state or local, not national, concern.[9] These things considered, it is clear that the Commission currently lacks the power to preempt state and local EAS plans generally.

RCA submits that the Commission also appears to be without congressionally delegated authority to specifically preempt state laws mandating wireless alerts. Congress attempted to be

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[8] Preemption occurs: (1) when Congress, in enacting a federal statute, expresses a clear intent to preempt state law; (2) when there is an outright or actual conflict between federal and state law; (3) where compliance with both federal and state law is in effect physically impossible; (4) where there is implicit in federal law a barrier to state regulation; (5) where Congress has legislated comprehensively, thus occupying an entire field of regulation and leaving no room for states to supplement federal law; or (6) where the state law stands as an obstacle to the accomplishment and execution of the full objectives of Congress. *See Louisiana PSC*, 476 U.S. 368-69.

[9] All weather (e.g., hurricanes, tornadoes, floods), natural (e.g., earthquakes, forest fires, volcanoes), technological (e.g., chemical releases, oil spills), and even national (e.g., terrorist attacks) emergencies begin as local emergencies.

precise in its preemption of state CMRS regulations. It preempted state regulation of the "entry of or rates charged by" CMRS providers, but expressly reserved state authority to regulate "other terms and conditions" of CMRS. 47 U.S.C. § 332(c)(3). The Commission has held that states are free to exercise their lawful authority to regulate CMRS providers so long as they do not engage in rate or entry regulation.[10] Thus, it seems that states can mandate wireless alerts provided that such mandates do not constitute a barrier to entry or amount to rate regulation. The fact that Congress could have explicitly preempted state regulation of CMRS operations, but did not, weighs against a finding that Congress intended to preempt the states from mandating that operating wireless carriers provide emergency communications.[11]

RCA has proposed a way by which the Commission can avoid a jurisdictional conundrum. It can permit CMRS providers to participate in the EAS by making handsets available to their customers that have the capability of receiving NWS warnings broadcast by the NOAA Weather Radio All Hazards ("NWR") network.[12]

II. SHORT MESSAGE SERVICE AND CELL BROADCASTING

Until recently, the discussion as to how emergency alert messages might be delivered to wireless phones has centered on text-based messages delivered using Short Message Service ("SMS") or cell broadcast technologies. RCA believes that such text based messages will prove to be problematic and ineffective in the dissemination of meaningful wide-scale EAS messaging in the case of a Presidential emergency or for tsunami, tornado or other types of local

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[10] *See Pittencrieff Communications, Inc.*, 13 FCC Rcd 1735, 1743-46 (1997), *aff'd, Cellular Telecommunications Industry Ass'n v. FCC*, 168 F.3d 1332 (D.C. Cir. 1999).

[11] The Commission has recognized that the line between preempted and permitted state CMRS regulation is unclear. *See Truth-in-Billing and Billing Format*, 20 FCC Rcd 6448, 6466 (2005). That lack of clarity would seem to preclude a finding that Congress intended to preempt any state CMRS requirement that was not clearly an entry or rate regulation.

[12] *See* RCA FNPRM Comments, at 8-11.

emergencies. The amount of meaningful and useful content using SMS or cell broadcasting that can be contained in typical CDMA and GSM text messages of 90 to 160 characters[13] is not sufficient to inform people as to what to do in an emergency situation and is likely to lead to unintended consequences. For example, insufficient EAS messages will cause recipients to immediately make calls on their wireless phones to seek clarification or additional information. Such calls would lead to severe network blockages in which no one will be able to make a call similar to what happened on 9-11.

RCA's prior comments addressed the major deficiencies in using SMS or cell broadcasting for the EAS (e.g., short message length, shortened battery life, lack of geographic specificity, network congestion, long delivery times, network capacity impacts, handset replacement, lack of indication that a received message is an EAS message, lack of multilingual capability, EAS messages are not received if the handset is in use).[14] RCA certainly was not alone in seeing those deficiencies.[15] Fundamentally because existing CMRS technology was designed for point-to-point wireless communications, any attempt to shoe-horn that technology into a point-to-multipoint EAS application is fraught with problems.

III. THE RCA PROPOSAL

Instead of text based messaging, RCA is proposing the integration of cell phones with receivers that can monitor the NWR, the nationwide network of radio stations that broadcast

[13] Attachment A hereto is a comparison of what portion of a NWR audio test message would be transmitted using various technologies for text messaging.

[14] *See* RCA NPRM Comments, at 5-12; RCA FNPRM Comments, at 5-8, Attachment A.

[15] *See* FNPRM Comments of Cingular Wireless LLC, at 6-10; FNPRM Comments of T-Mobile, at 9, 19-20; FNPRM Comments of Sprint-Nextel Corp., at 12-13; FNPRM Comments of Ericsson Inc, at 4-5.

comprehensive weather and emergency information from NWS offices around the country.[16] NWR broadcasts NWS warnings and post-event information for all types of hazards.[17] The all-hazards emergency messages can be short, but still contain sufficient emergency information and instruction to be meaningful to the recipients.

Given the existence of the nationwide NWR, and the advent of Public Alert™ devices, RCA questions the wisdom of creating a whole new network for emergency alerts. The capabilities of the NWR and Public Alert™ receivers were addressed in detail by several commenters.[18] It must be noted that the new generation of Public Alert™ radios meet the Public Alert Standard (CEA-2009) that was developed in 2003 by the Consumer Electronics Association ("CEA") in conjunction with the NWS.[19] These new radios assuredly are not your "father's weather radio" of the past.[20]

RCA submits that the capabilities and advantages of the NWR combined with Public Alert™ receivers are significant:

1. The NWR already covers 97% of the population of the United States.

2. The system is manned 24/7/356.

3. The processes for initiating, approving, authenticating and delivering alerts are in place for local and national alerts.

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[16] Known as the "Voice of the NOAA's National Weather Service," NWR is provided as a public service by the NOAA, which is part of the Department of Commerce. *See* Office of Climate, Water, and Weather Services, *NOAA Weather Radio All Hazards* (visited Feb. 19, 2006) <http://www.weather.gov./nwr/>.

[17] *See* Office of Climate, Water, and Weather Services, *All Hazards Emergency Messages on NOAA Weather Radio* (visited Feb. 19, 2006) <http://www.weather.gov/nwr/allhazard.htm>.

[18] *See* NPRM Comments of RadioShack Corp., at 4-12; FNPRM Comments of the Consumer Electronics Ass'n, at 5-10, Appendix I ("CEA Comments"); FNPRM Comments of Kenneth Putkovich, at 6-11; FNPRM Comments of John Merrell, at 5-13.

[19] *See* Office of Climate, Water, and Weather Services, *NWR Receiver Consumer Information* (visited Feb. 19, 2006) <http://www.weather.gov/nwr/nwrrcvr.htm>.

[20] *See* CEA Comments, at Appendices I and III.

4. The system can deliver emergency voice warnings within less than a minute of issuance and in conjunction with the NWS Weather Wire Service text messages in less than 10 seconds of issuance.

5. NWS Weather Wire Service text emergency warnings can be broadcast in any language.

6. NWR broadcasts can be made in multiple languages if multi-lingual staff is in place.[21]

7. The messages are geographically specific down to the county level today using Specific Area Message Encoding ("SAME"). The SAME codes allow for a higher level of geographic specificity (almost 9,000 geographically specific areas per state) by allowing the county to be divided into nine segments. In addition specific SAME codes could be assigned to critical areas such as capitols, the Pentagon, power plants, etc. In addition as pointed out by Kenneth Putkovich "the potential may also exist for future software changes that would expand NWR SAME from numeric to alphanumeric, raising the maximum number of possible geo-codes from 106 (1 million) to 366 (over 2 billion) for non-weather, All-Hazard warnings."[22]

8. The system is already providing over 96% of the alerts that are disseminated over the EAS system used by commercial broadcasters.

9. Existing Public Alert™ devices:

(a) can provide over 60 types of specific warnings;

(b) wake up to receive a warning targeted at specific geographic area based on SAME codes;

(c) allow for alerts to be displayed in English, Spanish, or French;

(d) provide alert indicators for the deaf and hard of hearing;

(e) indicate the severity of the alert visually on the display; and

(f) provide a distinctive tone when an alert is received as well as an end of message tone.

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[21] The NWR broadcasts on seven VHF frequencies (162.400, 162.425, 162.450, 162.475, 162.500, 162.525, and 162.550 MHz). A different language could be broadcast over each channel. The user could select the language when programming the handset.

[22] FNPRM Comments of Kenneth Putkovich, at 10.

The RCA proposal of integrating Public Alert™ receiver technology in wireless handsets avoids the problems inherent in trying to provide text-based messages over CMRS networks using SMS or cell broadcasting. At the same time, the proposal leverages the capability that exists with the use of Public Alert™ receiver technology. The integration of that technology answers most, if not all, of the questions the Commission posed in its *FNPRM*.

Cingular Wireless LLC ("Cingular") suggests without elaboration that the incorporation of a Public Alert™ radio in a handset "pose[s] serious issues regarding battery consumption and antenna configuration."[23] However, RCA notes that an Oregon Scientific Model WR-102 All-Hazards pocket size radio lasts about four weeks in monitor mode on three AA batteries.[24] In this mode, the radio monitors for the broadcast of the six-digit SAME code and only turns on when it receives one of the SAME codes that have been programmed into memory. RCA understands that a Nokia 3205 CDMA wireless phone containing an FM stereo radio ran for more than twelve hours continuously with the radio playing at full volume through the built-in speaker.

The new Oregon Scientific WR-108 radio is approximately the size of a large wireless phone and has an antenna that protrudes about 1.125 inch above the top of the radio (about the same size as the antenna for an LG VX 6000 CDMA dual-band wireless phone). *See infra* Attachment B. It is not clear how large the concealed section of the antenna is in the WR-108 radio. But RCA understands that an antenna design is in progress that will significantly reduce the size of the antenna so that it could easily fit into the case of existing handsets. However, if

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[23] Cingular FNPRM Comments, at 10 n.27. *See* T-Mobile FNPRM Comments, at 20 ("incorporation of a radio in a handset will have to overcome challenges like battery drainage").

[24] A full size picture of the Oregon Scientific Model WR-102 radio is attached hereto as Attachment B. The radio is shown displaying the text for a tornado warning.

antenna size proves to be an insurmountable problem, RCA suggests that about 150 KHz of the 24 MHz of 700 MHz spectrum (764-776 MHz and 794-806 MHz) presently allocated for public safety use be made available so that the NWR can simulcast public alerts using both its seven current 162 MHz frequencies and some small portion of the 700 MHz band.[25]

CTIA – The Wireless Association® ("CTIA") expresses concern that point-to-multipoint delivery of EAS messages would entail costly handset replacement.[26] RCA believes that the cost of integrating Public Alert™ receiver technology in wireless handsets will be minimal. For example, the Oregon Scientific Model WR-102 can be purchased from Amazon.com for less than $38 including three AA batteries and shipping. This radio is a six-band weather radio as well as a Public Alert™ receiver. Since most of the radio (case, display, battery compartment, buttons, etc.) will not have to be duplicated in a wireless phone, and the six-band weather radio is not needed, the increased cost of a handset containing an integrated Public Alert™ receiver should be less than $10.00.[27]

Finally, RCA joins the CEA in commending the comments filed by Kenneth Putkovich and John Merrell.[28] The latter in particular makes a compelling case that the current EAS should

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[25] T-Mobile notes that the incorporation of a radio in a handset would require "the user to tune to the proper frequency." FNPRM Comments, at 20. Tuning does not appear to be a problem since Public Alert™ technology is designed to turn on the radio to the correct channel when an alert is received.

[26] *See* CTIA FNPRM Comments, at 3-4.

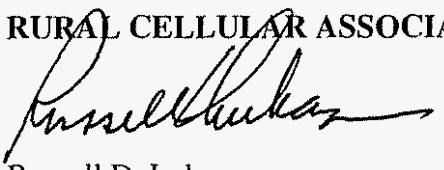
[27] RCA notes that some new wireless phones already contain a stereo FM radio.

[28] *See* CEA FNPRM Comments, at 1 & nn. 4, 5.

be abandoned in favor of the NRW infrastructure and Public Alert™ technology.[29]

Respectfully submitted,

RURAL CELLULAR ASSOCIATION



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[29] *See* FNPRM Comments of John Merrell, at 5-17 (available at <http://www.emergency-alerts.info/emergencyalerts/home.asp>).

Attachment A

The following compares the portion of an NOAA Weather Radio All Hazards ("NWR") audio test message would be transmitted using various technologies for text messaging.

Entire NWR Audio Message:

"This is a test of the NOAA radio warning device. During potentially dangerous weather situations, specially built weather radios will be automatically activated to warn of the impending hazards. Tests of these radios and the warning system will be conducted by the National Weather Service every Wednesday between 11 AM and Noon. Reception of this broadcast, and the warning alarm, will vary at any given location. This variability, normally more noticeable at greater distances from the transmitter will occur even though you are using a good quality receiver in perfectly good working order. To provide the most consistent warning service possible, the warning alarm will be activated only for warnings and selected watches affecting the listening area."

STATS:

39 seconds of audio
122 words
661 characters
782 characters including spaces

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160 characters and spaces (typical CDMA or GSM SMS text message limit[1]):

"This is a test of the NOAA radio warning device. During potentially dangerous weather situations, specially built weather radios will be automatically activated"

93 characters and spaces (GSM cell broadcast message limit):

"This is a test of the NOAA radio warning device. During potentially dangerous weather situations"

256 characters and spaces (CDMA cell broadcast message limit):

"This is a test of the NOAA radio warning device. During potentially dangerous weather situations, specially built weather radios will be automatically activated to warn of the impending hazards. Tests of these radios and the warning system will be conducte"

465 characters and spaces (GSM "concatenated" cell broadcast message limit):

According to ETSI, GSM cell boadcast capacity provides 93 message characters including spaces. However five groups (N.B., GSM standards say fifteen but ETSI recommends no more than five) can be concatenated and sent thus increasing the total message length to 465 characters. These messages can only be received by a mobile that is turned on and not in use (N.B., also true for CDMA Cell Broadcast), and it would take about 30 seconds to send all 465 characters.

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[1] Many wireless carriers limit text messages to 160 characters and spaces including the "from." Thus, as an EAS SMS text message, the NWR test message would look like this: "This is a test of the NOAA radio warning device. During potentially dangerous weather situations, specially built weather radios will be automatically active"

Attachment B

Oregon Scientific Model WR-108 SAME All Hazards Public Alert™ Radio

(actual size)